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LABOUR MARKET POLICY AND UNEMPLOYMENT

by

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Abstract

The paper discusses three aspects of the system for unemployment support. First, active labour market programmes as a means of re-allocating labour from high-unemployment to low-unemployment sectors are analysed, and it is concluded that wage-raising accommodation effects may be a serious problem. Second, the possibility of strengthening incentives for wage moderation by differentiating employee and/or employer contributions to unemployment insurance are discussed. Third, the question is raised whether there may exist other institutional set-ups for providing unemployment support that are more efficient in terms of returning the unemployed to work than government-run systems.

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Recent research has pointed to the importance of labour market institutions for unemployment. Much of the discussion has centred around the system of support for the unemployed, which includes both unemployment insurance and active labour market programmes (ALMPs). The latter are usually taken to include training, job creation and job brokering activities. The substitution of active programmes for unemployment benefits is widely held to reduce unemployment. This paper discusses three aspects of the system for unemployment support: (i) the role of ALMPs for the re-allocation of labour; (ii) financing; and (iii) the institutional set-up.

1. A model of labour re-allocation

ALMPs can in principle play two roles. The first is to "keep the unemployed going" in general during a recession, so that the effective aggregate supply of labour is maintained (Layard et al., 1991; Calmfors, 1994). Since programmes raise the welfare of the unemployed relative to that of the employed, a potential problem is, however, that incentives for wage restraint may be weakened in much the same way as with unemployment benefits (Calmfors & Nymoen, 1990; Calmfors & Forlund, 1991). This risk is minimised if ALMPs target long-term unemployed and other outsiders in the labour market (Layard et al., 1991; Calmfors & Lang, 1994).

The other main function of ALMPs is to "adjust the structure of labour supply to demand" (e.g. Jackman, 1994). This is the approach taken here. It is of obvious relevance for the discussion about shifts in demand from unskilled to skilled labour in the OECD countries because of technological developments, competition from low-wage economies and the relative decline of the manufacturing sector (Katz & Murphy, 1992; Drèze & Sneessens, 1994). It is also the traditional way of viewing ALMPs (OECD, 1990).

Early analyses of ALMPs were made in terms of the Phillips-curve framework. By shifting labour from high-unemployment to low-unemployment sectors, and thus exploiting the convexity of the Phillips curve, ALMPs were believed to reduce inflationary pressure at each level of aggregate unemployment (Lindbeck, 1975). This was supposed to make it possible for governments to pursue demand policies leading to lower unemployment. I shall recast this argument in a modern form. I then rely on the Blanchflower-Oswald (1994) notion of a non-linear wage curve, according to which wages - not wage increases - are more sensitive to unemployment the lower it is.
Consider an economy made up by one sector (H) with high wages and high employment, and one sector (L) with low wages and low employment. The two sectors produce tradables, the prices of which are exogenously given from the world market. Mobility of labour between sectors occurs only through government provision of ALMPs: L-workers can be retrained to become H-workers. An illustrative model is

\begin{align*}
(1) \quad \ln l_H &= \ln n_H + \ln m_H = \alpha_H - \beta \ln w_H \\
(2) \quad \ln l_L &= \ln n_L + \ln m_L = \alpha_L - \beta \ln w_L \\
(3) \quad \ln w_H &= \eta - \varepsilon \ln (1 - n_H) \\
(4) \quad \ln w_L &= \eta - \varepsilon \ln (1 - n_L) \\
(5) \quad m_H &= m(1 + r) \\
(6) \quad m_L &= m(1 - r) \\
(7) \quad n &= (l_H + l_L)/2m,
\end{align*}

where the subscript \( i = H, L \) indicates the sector, \( l_i \) the sectoral employment (the number of employed persons), \( n_i \) the sectoral employment rate as a proportion of sectoral labour supply \( m_i \), \( w_i \) the sectoral real (product) wage, \( 2m \) the total labour force, \( r \) programme participation as a proportion of half the total labour force, and \( n \) the aggregate employment rate as a proportion of the total labour force.

(1) and (2) are constant-elastic labour-demand equations where \( \alpha_H > \alpha_L \).

(3) and (4) are wage-setting relationships, where I use the Blanchflower-Oswald empirical formulation of the wage curve. According to (5) and (6) the labour force is distributed symmetrically in the absence of ALMPs, but retraining programmes for L-workers increases the relative supply to the H-sector. (7) gives the aggregate employment rate.

Setting \( r = 0 \) (in order to capture that training programmes usually encompass only a tiny fraction of the labour force), I obtain

\begin{align*}
(8) \quad \frac{dn_H}{dr} &= -n_H (1 - n_H)/(1 - n_H + \beta \varepsilon n_H) < 0 \\
(9) \quad \frac{dn_L}{dr} &= n_L (1 - n_L)/(1 - n_L + \beta \varepsilon n_L) > 0 \\
(10) \quad \frac{dn}{dr} &= \beta \varepsilon (n_H - n_L) [n_H + n_L (1 - n_H) + \beta \varepsilon n_H n_L]/2(1 - n_L + \beta \varepsilon n_L) \\
&\quad (1 - n_H + \beta \varepsilon n_H) > 0
\end{align*}

ALMPs lower the employment rate in the H-sector and raise it in the L-sector. According to (3) and (4) sectoral wages must move in the same direction. Hence employment expands in the H-sector and falls in the L-sector. This is illustrated in Figure 1 with \( \ln w_i \) and \( l_i \) on the axes. The wage-setting schedule
shifts downwards in the H-sector and upwards in the L-sector, so that the equilibrium for the two sectors move to A' and B' respectively.

From (10) it follows that aggregate employment increases since \( n_H > n_L \). There are three reasons for this: (i) a given change of sectoral labour supply \( m_i \) gives a larger change of the sectoral employment rate \( n_l = l_i/m_i \) (and hence a larger shift of the wage-setting schedule) the larger is \( l_i \) initially; (ii) because of the convexity of the wage curve a given change of the sectoral employment rate gives a larger shift of the wage-setting schedule (a larger percentage change of the wage) the higher initial employment; and (iii) by way of constant-elastic labour demand a given percentage change of the wage has a greater leverage on employment the higher it is initially (the labour-demand schedules in the diagram are flatter the higher is employment).

It is easily verified that the effect on aggregate employment may be substantial. Let \( n_H = 0.95, \ n_L = 0.85, \ \beta = 1 \) and \( \varepsilon = 0.1 \) (the Blanchflower-Oswald estimate). Then retraining of 1 percent of the labour force in the L-sector (0.5 percent of the total labour force) increases the aggregate employment rate by 0.16 percentage points.\(^1\)

Not surprisingly, the discussion so far confirms the old Phillips-curve intuition about ALMPs, although the mechanism is different. However, there is an important distinction to draw between different types of re-training programmes once one thinks about the theoretical underpinnings of the wage-setting relationship. I take it as being derived from a union-bargaining framework or an efficiency-wage model, where the wage depends positively on the expected utility (income) of a laid-off worker (Layard et al., 1991; Shapiro & Stiglitz, 1984). If so, the analysis above is applicable only to general re-training programmes that are open to everyone in the L-sector independently of employment status.

If we want to discuss ALMPs directed at the unemployed, as is typically the case, the analysis must be substantially modified. The reason is that wage-setting incentives are influenced if unemployment is a condition for participation in a re-training programme: this possibility changes the expected utility loss from being

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\(^1\) It is sometimes claimed that re-training is likely to be a much less effective employment policy at low than at high rates of employment. This is true if we hold the absolute difference between (un)employment rates constant. For instance, letting instead \( n_H = 0.98 \) and \( n_L = 0.88 \) one obtains \( dn/H = 0.22 \). However, it is a stylised fact of European unemployment that ratios of unemployment rates for different skill groups have stayed fairly constant (Layard et al., 1991). Compare therefore the example above with a high-employment situation in which \( n_H = 0.98 \) and \( n_L = 0.94 \), which gives the same ratios between unemployment rates \( (1 - n) \) as in the text. Then \( dn/H = 0.12 \), which is a smaller effect than above.
laid off in the L-sector. On the one hand the expected income of a laid-off L-worker tends to rise because of the chance to obtain the H-sector wage instead of the unemployment benefit, on the other hand it tends to fall because the reallocation of workers lowers \( w_H \) and \( n_H \) and thus the expected benefit of moving to the other sector.\(^2\) Writing in general form, (3) changes to

\[
\ln w_L = f(n_L, r, w_H, n_H), \quad f_1 > 0, \ f_2 > 0, \ f_3 \geq 0, \ f_4 \geq 0
\]

The reformulation of the L-sector wage equation adds a direct wage effect on \( n_L \) and \( n \) in (9) and (10) to the earlier reallocation effect. In general its sign is indeterminate, since, holding \( n_L \) constant, \( d \ln w/\ln r = (f_2 + f_4 \ln w_H/\ln r + f_4 \ln n_H/\ln r) \).

But at small values of \( r \) - which I consider to be relevant - the effects of changes in \( w_H \) and \( n_H \) are of second-order magnitude. Indeed, at \( r = 0 \) it must hold that \( f_2 = f_3 = 0 \) as the expected utility of a laid-off L-worker cannot be affected by H-sector developments when there is no reallocation of workers.\(^3\) Hence there must be an additional upward shift of the wage-setting schedule for the L-sector in Figure 1 with the new equilibrium for the sector at B" instead of B'. As a consequence retraining is made less effective as an employment policy tool. One cannot on theoretical grounds rule out the possibility that a reduction of wage and employment rate differences between sectors is bought at the expense of a reduction of aggregate employment.

My discussion points to a serious problem with re-training programmes which unfortunately follows from their very purpose: to move the unemployed to sectors with better job opportunities. It is questionable whether targeting the long-term unemployed represents a solution. Arguably the wage-raising accommodation effects would be reduced in a dynamic model like that of Calmfors & Lang (1993) as the expected benefit of participation in a programme is more heavily discounted the later it occurs. Such targeting on (already discouraged?)

\(^2\) Assume like e.g. Manning (1993) that the wage equation derives from firm-specific unions maximising the rents from unionisation \( I_{mL}(w_L - \bar{w}) \) - which is more or less equivalent to maximising the expected income of a representative member - where \( I_{mL}(w_L) \) is employment in firm \( j \), \( w_L \) the real wage, and \( \bar{w} \) the expected income in case of a lay-off. Utility maximisation then gives \( w_j = v\bar{w} \), where \( v = \beta/(\beta - 1) \) and \( \beta \) is the labour-demand elasticity. If \( \phi(n_L) \) is the probability of employment elsewhere in the L-sector and \( \bar{w} \) the expected income for a L-worker not receiving employment in his own sector, we have \( \bar{w} = \phi w_L + (1 - \phi)\bar{w} \). The conditional probability for a L-worker that is not employed in the L-sector to be transferred to the H-sector is \( \lambda = rm/(m L_L) \). Hence \( \bar{w} = \lambda n_H w_H + (1 - \lambda)\bar{b} \), where \( b \) is the unemployment benefit. If \( w_{HL} = w_L \) in equilibrium, a wage equation like (4a) is obtained, where \( \partial \ln w_L/\partial r > 0 \) provided that \( w_H > b \).

\(^3\) In footnote 2 it holds that \( \partial \ln w_L/\partial n_H = \partial \ln w_L/\partial w_H = 0 \) when \( r = \lambda = 0 \).
long-term unemployed is, however, likely to be a very inefficient way of "producing" H-sector workers. My main conclusions are instead:

(i) It may be a better employment policy to let re-training programmes in a stagnating sector be open to everyone there (that is to the employed as well) than to target the unemployed only. Then new job opportunities can be created without adverse wage-setting effects.

(ii) All types of unemployment support are likely to have negative side effects. There are good reasons to believe that they can be reduced if ALMPs are substituted for unemployment benefits of long duration (Layard & Nickell, 1991; Calmfors, 1994), but they are still likely to be there. This raises the issue of how to minimise such adverse effects.

2. Financing of unemployment support

One way of trying to mitigate the conflict between the goals of income support for the unemployed and of maintaining strong incentives for employment is to differentiate the taxes/contributions that pay for unemployment support. One example is the US system of an experience-rated pay-roll tax, which is set to reflect individual employers' lay-off history. By increasing the cost of firings the tax works as a disincentive to job destruction. But the net employment effects is theoretically ambiguous, since the expected cost of hirings is also raised and hence job creation discouraged (Mortensen, 1994).

An alternative, which I shall focus on, is to try to influence wage-setting incentives by differentiating the contributions to unemployment support according to bargaining areas (Holmlund & Lundborg, 1988; Calmfors, 1993). This approach should be of relevance for Europe where bargaining often occurs at an intermediate (usually industry) level, in which case hiring and firing costs of firms would not be directly affected. The underlying rationale for the proposal is that government provision of unemployment support (both unemployment benefits and ALMPs) creates an externality in wage setting (Calmfors, 1993a). By facing the parties to bargaining with some of the costs for unemployment, this externality can be partly internalised.

Consider as an illustration the case where wages in individual sectors are set by sector-wide monopoly unions which maximise the expected income of a representative member \( \left( \frac{t}{m} \right) \left( w(1-t) + (1-(t/m)) b \right) \), where \( t = t(w) \) is employment in a representative sector, \( w \) the real wage, \( t \) a sector-specific tax rate for employees, \( m \) union membership and \( b \) a properly weighted average of the unemployment
benefit and compensation in ALMPs (I now disregard labour mobility between sectors). Assume also that the sector-specific tax rate $t$ is the sum of a base rate $t_0$ that is common to all sectors, and a variable rate $t_1$ which is set so as to cover a fraction $\gamma$ of the cost for unemployment support to the sector in question, i.e. $t = t_0 + t_1 = t_0 + \gamma(m-l)b/wl$. Union utility maximisation subject to the labour-demand and tax-rate constraints can be shown to give

$$w(1-t_0) = \frac{\beta}{\beta-1}(1-\gamma)b,$$

where $\beta$ as before is the labour-demand elasticity. The wage corrected for the base tax rate becomes a mark-up on the part of the unemployment support that is paid for by the rest of the economy (rather than a mark-up on the full unemployment benefit as in the standard analysis in e.g. Layard et al., 1991). It is easy to demonstrate that an increase in the share of costs for unemployment support that has to be born by each sector itself $\gamma$ (which must be balanced by a cut of the base tax rate $t_0$ if the aggregate budget constraint for unemployment support in the whole economy is to hold) reduces the wage and increases employment.\(^4\)

The case for linking employee contributions to sectoral unemployment does not rest on the assumption that unions care about their unemployed members (as does the case for reduced unemployment benefits in a union-bargaining framework). Provided that labour demand is not too inelastic, the argument goes through also in a bargaining model where the representative union cares only about the income of its employed members (insiders) since the latter would then be forced to consider the costs for unemployment. This is easily verified if we, for instance, assume that the wage is set so as to maximise the Nash bargaining product $(w(1-t))^a \pi^{1-a}$, where $\pi$ denotes the aggregate profit in the sector.\(^5\)

A similar incentive for wage restraint is created if benefits and ALMPs are instead paid for by pay-roll taxes that are also differentiated sectorwise. In a

\(^4\) If employee contributions are to cover the full cost of unemployment support in the economy, $t_0$ must be set so that $(m-l)b = t_0wl + \gamma(m-l)b$ for a representative sector. Taking this into account and differentiating (11) w.r.t. $w$ and $\gamma$ gives $dw/d\gamma = b[(\beta-1)(m-l)/l]/D < 0$ provided that $D < 0$ (which follows from "dynamic stability").

\(^5\) Let $\theta = 1/(1-t)$ and $\pi = y - wl$, where $y$ = output. Then maximisation of the Nash bargaining product above under the same labour-demand and tax assumptions as in the monopoly-union case gives the FOC $a((1/w) - (d\theta/dw) - (1/\theta)) - (1-a)l/\pi = 0$, where $(d\theta/dw)(1/\theta) = \beta(m(\beta-1)+1)/wl^2(1-t)$ and $\beta$ is the labour-demand elasticity (assumed variable in this model). A rise in $\gamma$, holding $w$ and $\theta$ constant (so that tax income from the sector is constant), raises $(d\theta/dw)(1/\theta)$ and thus strengthens the incentive for wage moderation if $\beta > 1 - l/m$. 
monopoly-union model the effect arises because the employment loss of a wage rise is magnified when pay-roll taxes increase to pay for the unemployed. In a bargaining model the employer side has also to consider that the profit reduction due to a wage rise is reinforced. The incentive effects of differentiating employee and employer contributions do in general differ quantitatively, the difference depending upon the exact specification of the wage-setting process.

A disadvantage of financing unemployment support with an employer tax is that the employment reductions that still may occur - e.g. as a consequence of real-wage increases caused by expectational errors or disinflation in conjunction with nominal wage rigidity - will be reinforced by increased labour costs. This is the same weakness as with the TIP proposals on an employer tax on wage increases above a certain norm (e.g. Layard et al., 1991), which has many similarities with the present proposal. Compared with TIP the idea put forward here would, however, seem to have one clear advantage: it ought to be far easier to gain political acceptance for the notion that each sector must bear part of the costs for its own unemployed than for the idea that high wage increases (which an expanding sector might be able to afford without employment losses) should be punished by "arbitrary" tax increases.

The main disadvantage with differentiating contributions to the support for the unemployed as suggested is that less insurance is provided for individual sectors (thought not for unemployed individuals) in the case of sector-specific shocks. Such welfare losses must be traded off against the gains from more wage restraint. It seems unlikely though that the optimal outcome would be no differentiation at all, as is presently the case nearly everywhere.

3. The institutional set-up

Today the system for unemployment support is in most countries a government-run one (or in some cases, such as in Germany and France, a corporatist one involving also the central labour market organisations). It is not clear that this is necessarily the optimal institutional set-up if we want a system that - given the degree of income protection - is as efficient as possible in returning the unemployed to work. A basic political-economy question is how to devise institutions that produce an efficient allocation of resources between benefits and ALMPs and between different types of ALMPs.

The present allocation of funds between large expenditures on "passive" unemployment benefits and small expenditures on ALMPs in most European
countries (OECD, 1994) does suggest that the present institutional framework has not worked well. This may be due to a built-in bias in the budgetary processes: benefits are provided "according to need", whereas discretionary government decisions are required in the case of programmes. Another indication of badly functioning systems is the use in some countries of ALMPs mainly as a means of making participants eligible for new periods of unemployment benefits. With such a use of ALMPs the incentives to strive for maximum efficiency in terms of enhancing re-employment probabilities are likely to be seriously weakened (the marginal utility from re-employment should fall to the extent that programme participation is expected to generate a future stream of unemployment benefits). There is some evidence that this may have occurred in both Denmark and Sweden (Calmfors, 1994).

Are there alternatives to the present institutional set-up in most of Western Europe? In Denmark, Finland and Sweden the bulk of unemployment insurance is provided by union-affiliated funds, although the costs are covered mainly by general taxes collected by the government. If these union funds were instead partly financed by differentiated employee contributions, this system could potentially deliver two advantages in addition to the incentives for wage restraint elaborated above. First, member incentives to control misuse of benefits would be strengthened. Second, it might be natural to let the union funds decide on and finance re-training programmes and own employment offices as well. They would then have strong incentives to allocate their resources in an efficient way between benefits and different programmes so as to minimise the cost for unemployment that the members have to pay for.

However, there may also be drawbacks of union-provided unemployment insurance. The contributions to the costs from general tax revenues may work as a government subsidy of union membership. Empirical research seems indeed to indicate that union-affiliated unemployment insurance tends to increase the rate of unionisation (Neumann et al. 1991). The latter factor is likely to work in the direction of increased wage pressure (Layard et al., 1991; Calmfors, 1993a). Also, a union-based system may not be consistent with the entry of new - and potentially more efficient - insurers. An intriguing question is therefore whether there are other ways of privatising the system for unemployment support in order to increase efficiency. Could unemployment insurance be provided by ordinary insurance companies or mutual ones that are not linked to unions, and where competition for customers is allowed?
There are two standard arguments against private unemployment insurance (Björklund & Holmlund, 1991). The first concerns adverse selection, the second the amount of macroeconomic risk for insurers. As discussed in Calmfors (1993b), these problems might be overcome if private unemployment insurance is made compulsory (like sick or car insurance in many countries), if it is regulated, and if there is a substantial amount of government subsidisation (for example government could pay a certain fraction of benefits out of general tax revenues). Regulation should include compensation levels. It could also encompass the relative contributions from different categories of workers in order to avoid prohibitively high insurance premia for individuals with high risks of becoming unemployed. In contrast, the average contribution for the employees insured by a certain company could be decided by the company itself on the basis of its costs. If relative contributions are set to reflect relative unemployment rates in different bargaining areas, such a system - where each company insures many different categories of workers - would also be able to deliver the incentives for wage restraint discussed above.

My discussion is admittedly speculative. Potential benefits of privatisation in terms of stronger incentives for returning the unemployed to work and more potential for experimenting with new measures must be weighed against economies of scale of government systems. One has also to analyse the conflict between a desired role for the government as "an insurer of last resort" and undesired incentive effects of bailing out inefficient insurers.

There is, however, a consensus that present systems of unemployment support in Western Europe have contributed to the persistence of unemployment. This is usually discussed in terms of the balance between benefits and active programmes. I am not convinced that such a discussion of the choice of instruments goes far enough. The crucial issue may be the much more basic one of how to design institutions that create incentives to choose efficient labour market policies. If so, one needs to think about fundamental organisational reform in ways that we have not been used to. There should be a strong à-priori case for at least examining the possibility of more decentralised solutions in the system for unemployment support.
References


Figure 1: Re-allocation of labour